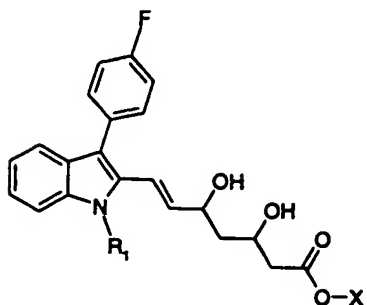


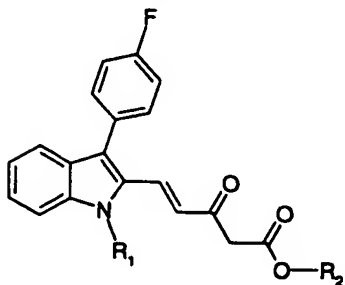
What is claimed is:

1. A process for the preparation of a compound of formula



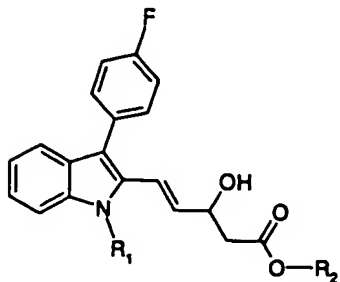
(1),

wherein R_1 is C_1 - C_6 alkyl and
X is hydrogen, a hydrocarbon radical or a cation,
wherein a compound of formula



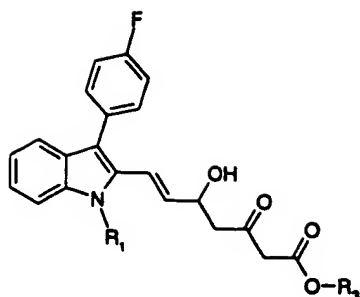
(2),

wherein R_1 is as defined above and R_2 is hydrogen or a hydrocarbon radical, is reduced, the
resulting compound of formula



(3),

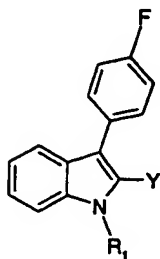
wherein R_1 and R_2 are as defined above, is reacted with a compound that introduces the
radical of formula $-CH_2-COOR_3$ wherein R_3 has the meanings given above for R_2 , and the
resulting compound of formula



(4)

is reduced and optionally hydrolysed.

2. A process according to claim 1, wherein the compound of formula (2) is obtained by reacting a compound of formula



(5),

wherein R_1 is as defined in claim 1 and

Y is bromine, chlorine, iodine, $-\text{OSO}_2\text{CF}_3$ or $-\text{COCl}$, especially bromine,

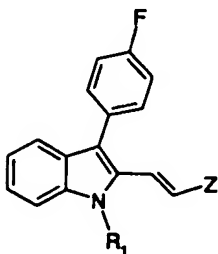
with a compound that introduces the radical of formula $-\text{CH}=\text{CH}-Z$, wherein

Z is the radical $-\text{COOR}_4$, $-\text{COR}_5$ or $-\text{CN}$,

R_4 is hydrogen or a hydrocarbon radical and

R_5 is a hydrocarbon radical or unsubstituted or substituted amino,

and reacting the resulting compound of formula



(6),

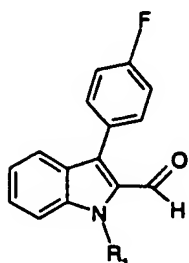
optionally after conversion of the compound of formula (6) wherein Z is the radical

$-\text{COOR}_4$ into the corresponding acid chloride or into the free acid,

with a compound that introduces the radical of formula $-\text{CH}_2-\text{COOR}_2$ wherein

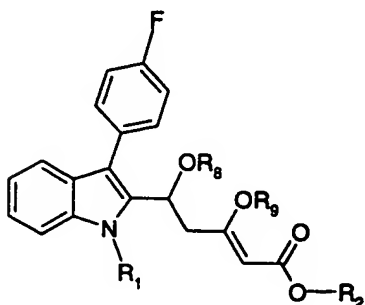
R_2 is as defined in claim 1.

3. A process according to claim 1, wherein the compound of formula (2) is obtained by reacting a compound of formula



(9)

with a compound of formula $\text{CH}_3\text{-CO-CH}_2\text{-COOR}_2$ and, optionally, then with a compound that introduces a protecting group, to form a compound of formula



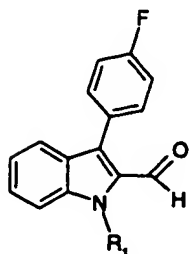
(10)

wherein R_1 and R_2 are as defined in claim 1, and

R_8 and R_9 are hydrogen or a protecting group,

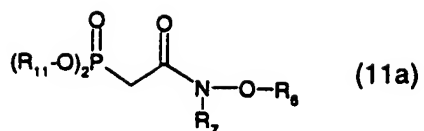
introducing a double bond under acidic or basic conditions, and removing any protecting group that may be present.

4. A process according to claim 1, wherein the compound of formula (2) is obtained by reacting a compound of formula

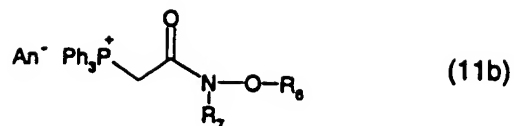


(9)

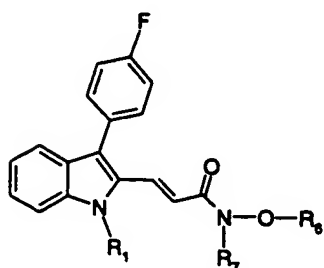
with a compound of formula



or



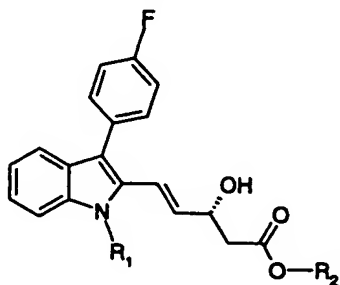
to form a compound of formula



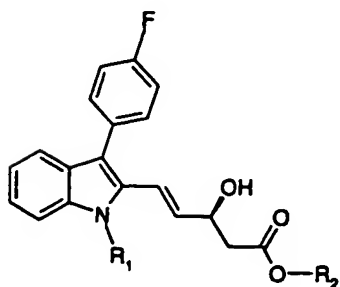
(8)

and reacting that compound with a compound that introduces the radical of formula $-CH_2-COOR_2$ wherein R_1 and R_2 are as defined in claim 1, R_8 and R_7 are hydrogen or hydrocarbon radicals, R_{11} is C_1 - C_4 alkyl or phenyl, especially methyl or ethyl, Ph is phenyl and An^- is an anion.

5. A process according to any one of claims 1 to 4, wherein there is used as compound of formula (3) a compound of formula



(3a) or



(3b)

wherein R_1 and R_2 are as defined in claim 1.

6. A process according to any one of claims 1 to 5, wherein the compound of formula (4) is hydrolysed.

7. A process according to any one of claims 1 to 6, wherein R_1 is isopropyl.

8. A process according to any one of claims 1 to 7, wherein R_2 , R_3 , R_4 , R_6 and R_7 are C_1 - C_8 alkyl.

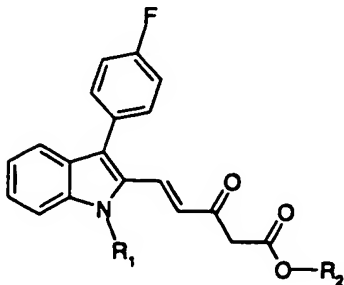
9. A process according to any one of claims 1 to 8, wherein R_5 is C_1 - C_6 alkyl or a radical of formula $-N(OR_6)R_7$ in which R_6 and R_7 are C_1 - C_6 alkyl.

10. A process according to any one of claims 3 and 5 to 8, wherein R_8 and R_9 are each independently of the other hydrogen, C_1 - C_4 alkylcarbonyl or C_1 - C_4 alkoxy-carbonyl.

11. A process according to any one of claims 2 and 6 to 9, wherein Y is bromine.

12. A process according to any one of claims 1 to 11, wherein X is a cation, especially sodium.

13. A compound of formula



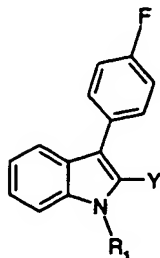
(2),

wherein R_1 is C_1 - C_6 alkyl and

R_2 is hydrogen or a hydrocarbon radical, especially C_1 - C_6 alkyl.

14. A compound according to claim 13, wherein R_1 is isopropyl and R_2 is C_1 - C_6 alkyl.

15. A process for the preparation of a compound of formula (2) according to claim 13, wherein a compound of formula



(5),

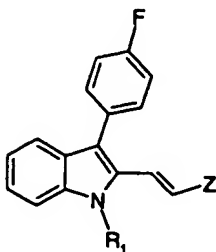
wherein R_1 is as defined in claim 13 and

Y is bromine, chlorine, iodine, $-\text{OSO}_2\text{CF}_3$ or $-\text{COCl}$, especially bromine, is reacted with a compound that introduces the radical of formula $-\text{CH}=\text{CH}-\text{Z}$, wherein Z is the radical $-\text{COOR}_4$, $-\text{COR}_5$ or $-\text{CN}$,

R_4 is hydrogen or a hydrocarbon radical and

R_5 is a hydrocarbon radical or unsubstituted or substituted amino,

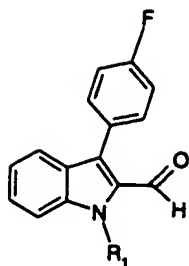
and the resulting compound of formula



(6),

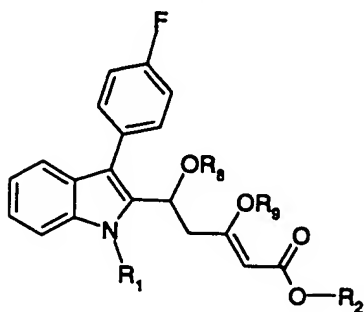
optionally after conversion of the compound of formula (6) wherein Z is the radical $-\text{COOR}_4$ into the corresponding acid chloride or into the free acid, is reacted with a compound that introduces the radical of formula $-\text{CH}_2-\text{COOR}_2$ wherein R_2 is as defined in claim 13.

16. A process for the preparation of a compound of formula (2) according to claim 13, wherein a compound of formula



(9)

is reacted with a compound of formula $\text{CH}_3\text{-CO-CH}_2\text{-COOR}_2$ and, optionally, then with a compound that introduces a protecting group, to form the compound of formula



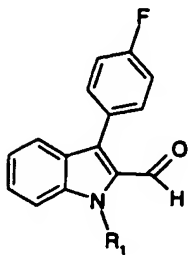
(10)

wherein R_1 and R_2 are as defined in claim 13 and

R_8 and R_9 are hydrogen or a protecting group,

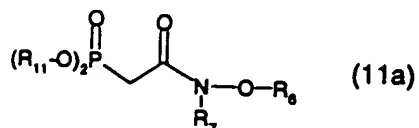
a double bond is introduced under acidic or basic conditions, and any protecting group that may be present is removed.

17. A process for the preparation of a compound of formula (2) according to claim 13, wherein a compound of formula



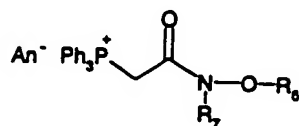
(9)

is reacted with a compound of formula



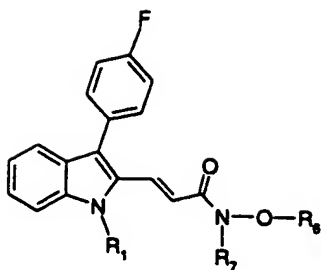
(11a)

or



(11b)

to form the compound of formula



(8)

and that compound is reacted with a compound that introduces the radical of formula $-\text{CH}_2-\text{COOR}_2$ wherein R_1 and R_2 are as defined in claim 13,

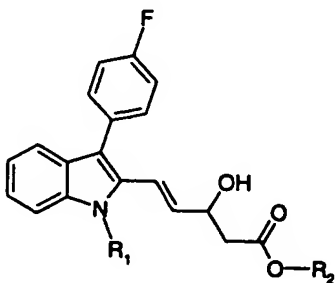
R_6 and R_7 are hydrogen or hydrocarbon radicals,

R_{11} is C_1 - C_4 alkyl or phenyl, especially methyl or ethyl,

Ph is phenyl and An^- is an anion

18. The use of a compound of formula (2) according to claim 13 as an intermediate in the preparation of a compound of formula (1) according to claim 1.

19. A compound of formula

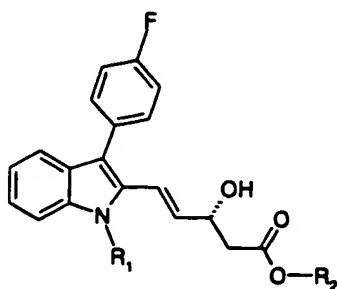


(3),

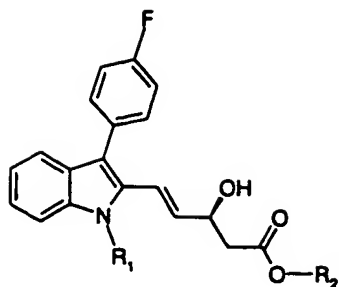
wherein R_1 is C_1 - C_6 alkyl and

R_2 is hydrogen or a hydrocarbon radical, especially C_1 - C_6 alkyl.

20. A compound according to claim 19 of formula



(3a) or



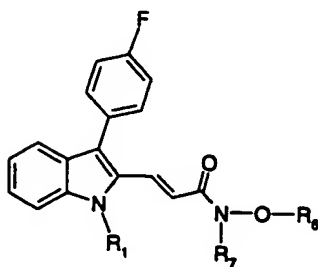
(3b)

wherein R_1 and R_2 are as defined in claim 19.

21. A compound according to either claim 19 or claim 20, wherein R_1 is isopropyl and R_2 is C_1 - C_8 alkyl.

22. The use of a compound of formula (3) according to claim 19 as an intermediate in the preparation of a compound of formula (1) according to claim 1.

23. A compound of formula



(8),

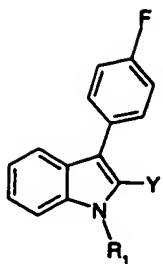
wherein R_1 is C_1 - C_8 alkyl, and

R_6 and R_7 are hydrogen or hydrocarbon radicals, especially C_1 - C_8 alkyl.

24. A compound according to claim 23, wherein R_1 is isopropyl and R_6 and R_7 are C_1 - C_8 alkyl.

25. The use of a compound of formula (8) according to claim 23 as an intermediate in the preparation of a compound of formula (1) according to claim 1 or of a compound of formula (2) according to claim 13.

26. A compound of formula



(5),

wherein R_1 is C_1 - C_6 alkyl and

Y is bromine, chlorine or iodine, especially bromine.

27. A compound according to claim 26, wherein

R_1 is isopropyl and Y is bromine.

28. The use of a compound of formula (5) according to claim 26 as an intermediate in the preparation of a compound of formula (1) according to claim 1 or of a compound of formula (2) according to claim 13.